

INFORMATION REPORT INFORMATION REPORT

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COUNTRY USSR (Ukrainian SSR)

REPORT

SUBJECT 1. Geophysical Studies at the Lvov Polytechnical Institute
2. Lvov Branch, Ukrainian Academy of Sciences

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1. An eight-page report on geophysical studies at the Lvov Polytechnic Institute and the Lvov Branch of the Ukrainian Academy of Sciences

The report states that

the geological faculty of the Lvov Polytechnic Institute is subdivided into four departments: geodesy, astronomical geodesy, geology, and geophysics. Geophysics has about 250 students; the entire department of geology, about 1,000 students. The report goes on to itemize the curriculum in the five-year geophysical course, including the required field work and military training. This part of the report includes two items of interest:

- a. In 1956 a number of advanced students did their "practical training" with a geophysical team near Poltava (N 49-35, E 34-34), where extensive oilfields were discovered. Their results were processed by "Ukrneftegeofizika" and classified.
 - b. In the same year a small group of graduating geophysics students was selected to undergo further training in prospecting for radioactive minerals. This group after graduation went to study at the central geophysical institute in Moscow.
2. The report then describes the organization of the Lvov Branch of the Ukrainian Academy of Sciences, and some of the people connected with it and with the polytechnical institute. The Lvov branch of the academy is investigating the crystallized strata of soil structure in the western Ukraine by means of the seismic, gravimetric, and magnetic methods, and by the Schlumberger test.

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SUBJECT: Geophysical Studies at the Lvov Polytechnic
Institute and the Ukrainian Academy of
Sciences, Lvov Branch

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Lvov Polytechnic Institute

1. The geological faculty of the Lvov Polytechnic Institute has an enrollment of approximately 1,000 students. The main departments of this faculty are as follows:

- a. Department of astronomical geodesy
- b. Department of geodesy
- c. Department of geology
- d. Department of geophysics.

2. The aim of the geophysical department, which usually has about 250 students, is to train engineers for geological exploration

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teams. During a five year course of studies, the students attend lectures and undergo examinations in the following subjects:

- a. Principles of Marxism-Leninism.
- b. Political economy (Politekonomia)
- c. Foreign languages (English, French or German)
- d. Higher mathematics
- e. Physics A (theory of electro-magnetic fields)
- f. Physics B (quantum mechanics)
- g. Chemistry (general) and the elements of analytical chemistry.
- h. Organic chemistry
- i. Geometrical drawing and graphics
- j. Geodesy and topographical drawing
- k. Theoretical mechanics
- l. Technical mechanics
- m. Electro-technics and radio-technics
- n. General geology
- o. Historical geology, palaeontology, geology of the USSR.
- p. Applied geology
- q. Crystallography and mineralogy

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- r. Petrography and quarrying
- s. Geology of oil and gas deposits
- t. Prospecting for oil and gas resources
- u. Introduction to industrial geophysics and geophysical research
- v. Theory of flexibility
- w. Drilling for prospecting purposes
- x. Prospecting by the gravimetrical method
- y. Prospecting by the magnetic method
- z. Prospecting by the seismic method
- aa. Prospecting by the electrical method
- bb. Geo-chemical prospecting methods
- cc. Industrial geophysics
- dd. Geological meaning of geophysical and geotectonic data
- ee. Theory of blasting
- ff. Economics of the oil and gas industry
- gg. Organization and planning of geological exploration institutions.
- hh. Technology of safety precautions and fire-fighting.

3. In the third, fourth and fifth year of studies, the students are required to submit papers on the following subjects:

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- a. Applied geology
- b. Electro-technics and radio-technics
- c. Prospecting for oil and gas resources
- d. Prospecting by the gravimetrical method
- e. Prospecting by the electrical method
- f. Prospecting by the seismic method
- g. Organization and planning of geological prospecting institutions.

4. The geophysical laboratory has at its disposal all the equipment used by geological survey teams in their field work. The laboratory also has a seismic station, seismographs, electric measuring instruments, a generator, gravimetric instruments, a variometer, a special power station for geological exploration by the electric method, apparatus for Schlumberger tests, and instruments used in the magnetic method of geological explorations.

5. In their fifth year of studies, the students join a geological team working in the field for a practical training period of three months duration. In 1956 a number of students about to receive their degrees did their practical training with a geophysical team working in the vicinity of Poltava (N 49-35, E 34-34), where extensive oil fields were discovered, on behalf

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of "Ukrneftegeofizika". The material collected by the students during this period was regarded as classified. After the students had processed it under the supervision of "Ukrneftegeofizika"'s offices in Kiev, it was forwarded to the college by the institute's secret bureau.

6. The course of studies also includes military training. The students of all departments of the geological faculty are attached to the artillery branch. The major subjects studied in their military training include topography, surveying, artillery tactics and gunnery training.

7. In mid-1956, before the end of the academic year, a small group of students in the graduating class of the geophysical department was selected for the purpose of undergoing further training in the prospecting of radioactive materials. After graduation, this group of young engineers was sent to Moscow for further study at the central geophysical institute there.

8. The scientific staff of the geophysical department is engaged in research work for the purpose of attaining higher academic degrees. In 1956 one of the department's docents, a man by the name of Timoshin (fnu), defended a thesis on the

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subject of "Raschoti Metoda Otrazhonnikh Voln Ot Krivolinyey-Nikh Granits". *[Accounts of the method of reflecting waves from curvilinear boundaries.]*

Lvov Branch of the Ukrainian Academy of Sciences

9. The branch of the Ukrainian Academy of Sciences in Lvov is situated on Kopernika Street, in the former Potocki Palace, near 1-~~10~~ Maya Street. The academy carries out its work in accordance with a central plan laid down by the Soviet Academy of Sciences. The Lvov branch is composed of the following departments:

- a. Geology
- b. Physics
- c. Nuclear physics
- d. Mechanics
- e. Geophysics
- f. Chemistry
- g. Ukrainian language and literature

10. In the field of geophysics, the Lvov branch of the academy is engaged in the investigation of the crystalized strata of soil structure in the Western Ukraine. Geophysical teams carry out these investigations by means of the seismic, gravimetric and magnetic methods, as well as by the Schlumberger test. The

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academy's geophysical department in Lvov collaborates with its counterpart at the Polytechnic Institute, and the scientists on its staff lecture to the students on geological and geophysical subjects.

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Personalities

11. The following individuals are with the Lvov Polytechnic Institute:

N.K

a. Migal (~~fm~~), dean of the geological faculty of the institute, is professor of geodesy and astronomy.

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b. Pietkewicz (fm) is a scientific worker and lecturer in the geophysics department at the institute.

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[A.N.?] c. Snarskiy (fm) is deputy dean of the geological faculty at the institute.

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d. Timoshin (fm), docent in the geophysical department of the institute

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e. Trachuk (fm), professor of mineralogy, holds the chair in mineralogy at the institute.

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f. Vosanchuk (fm), a docent, holds the chair in geophysics at the institute.

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12. The following individuals are with the Lvov Academy of Sciences:

a. Klushin (fm) is a scientist on the staff of the geophysical department of the Lvov Academy of Sciences.

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b. ^yLadzhinskiy (fm), professor of geology, is director of geology at the Lvov Academy.

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^{S.I.}
^b
c. Subotin (~~fm~~), an expert in gravimetrics, is head of the geophysical department at the Lvov Academy of Sciences.

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